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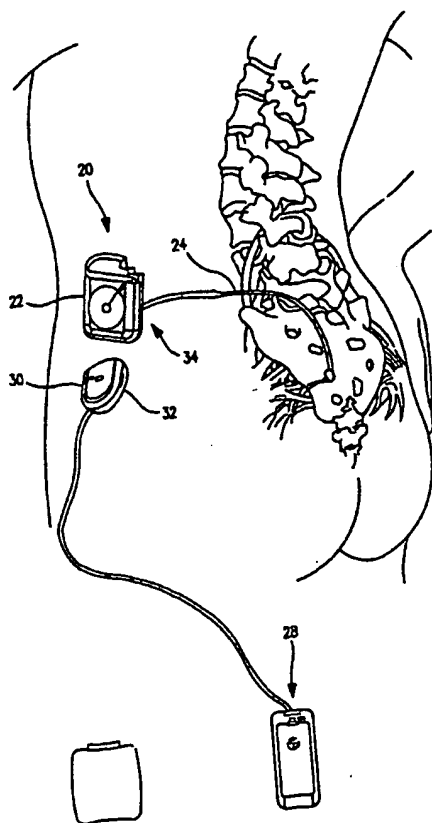
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(54) Title: AN IMPLANTABLE MEDICAL DEVICE WITH AREGARDING COIL MAGNETIC SHIELD



(57) Abstract: A rechargeable implantable medical device with a magnetic shield placed on the distal side of a secondary recharging coil to improve recharging efficiency is disclosed. The rechargeable implantable medical device can be a wide variety of medical devices such as neuro stimulators, drug delivery pumps, pacemakers, defibrillators, diagnostic recorders, and cochlear implants. The implantable medical device has a secondary recharging coil carried over a magnetic shield and coupled to electronics and a rechargeable power source carried inside the housing. The electronics are configured to perform a medical therapy. Additionally a method for enhancing electromagnetic coupling during recharging of an implantable medical device is disclosed, and a method for reducing temperature rise during recharging of an implantable medical device is disclosed.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/18926

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61N1/378 A61N1/36

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61N A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 071 032 A (SCHULMAN JOSEPH H) 31 January 1978 (1978-01-31) the whole document	1-3,6,7, 9,10,17, 22-28, 30,31, 33,35, 37-41, 43,45
X	US 4 041 955 A (KELLY FRANK L ET AL) 16 August 1977 (1977-08-16) the whole document	1-3,6,7, 9,10,17, 22-25, 30,31, 33,35, 37-41, 43,45
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☒ Further documents are listed in the continuation of box C.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	WO 99 44684 A (BORZA MICHAEL A ; DEW ENGINEERING AND DEV LIMITE (CA)) 10 September 1999 (1999-09-10) the whole document	1-3, 5-7, 9, 10, 17-20, 22-28, 30, 31, 33, 35-41, 43, 45
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Information on patent family members

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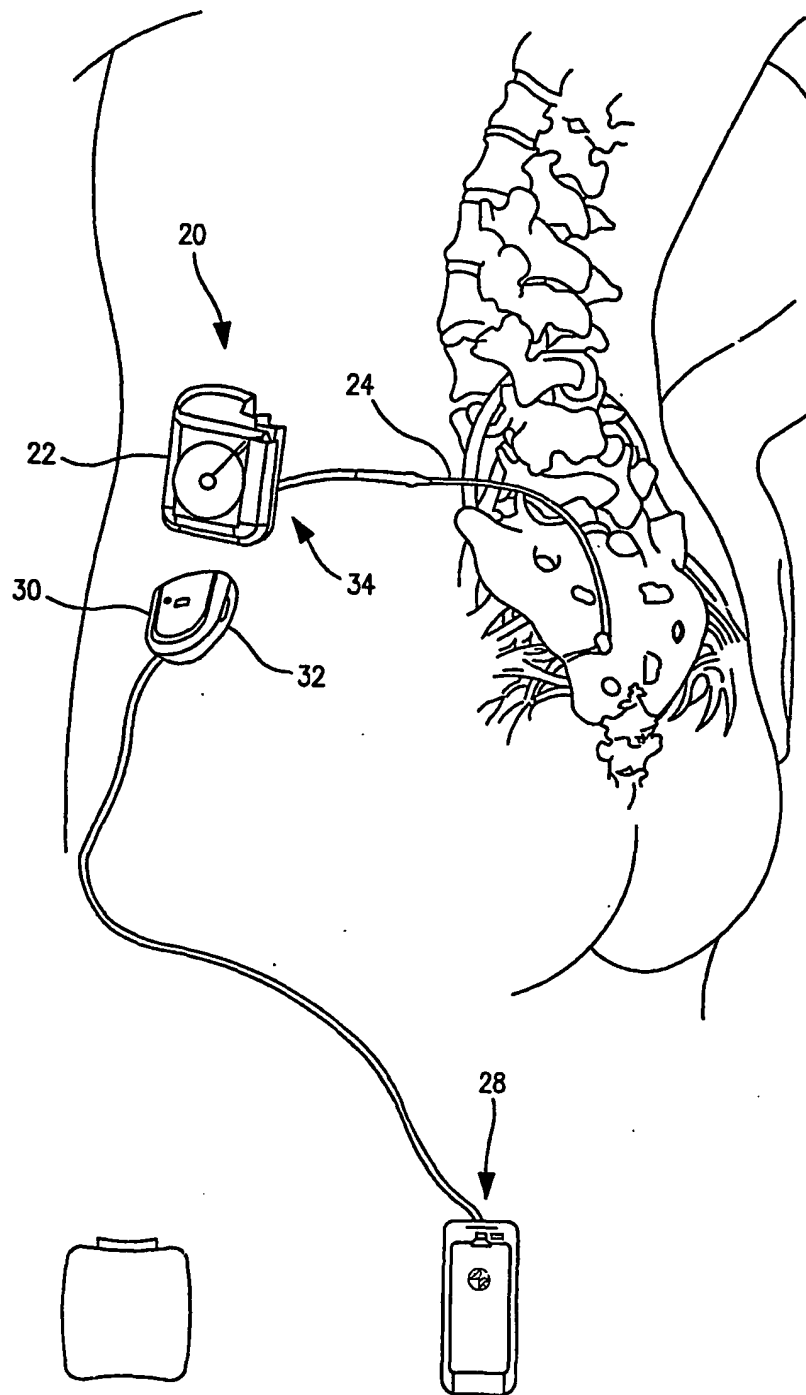


FIG. 1

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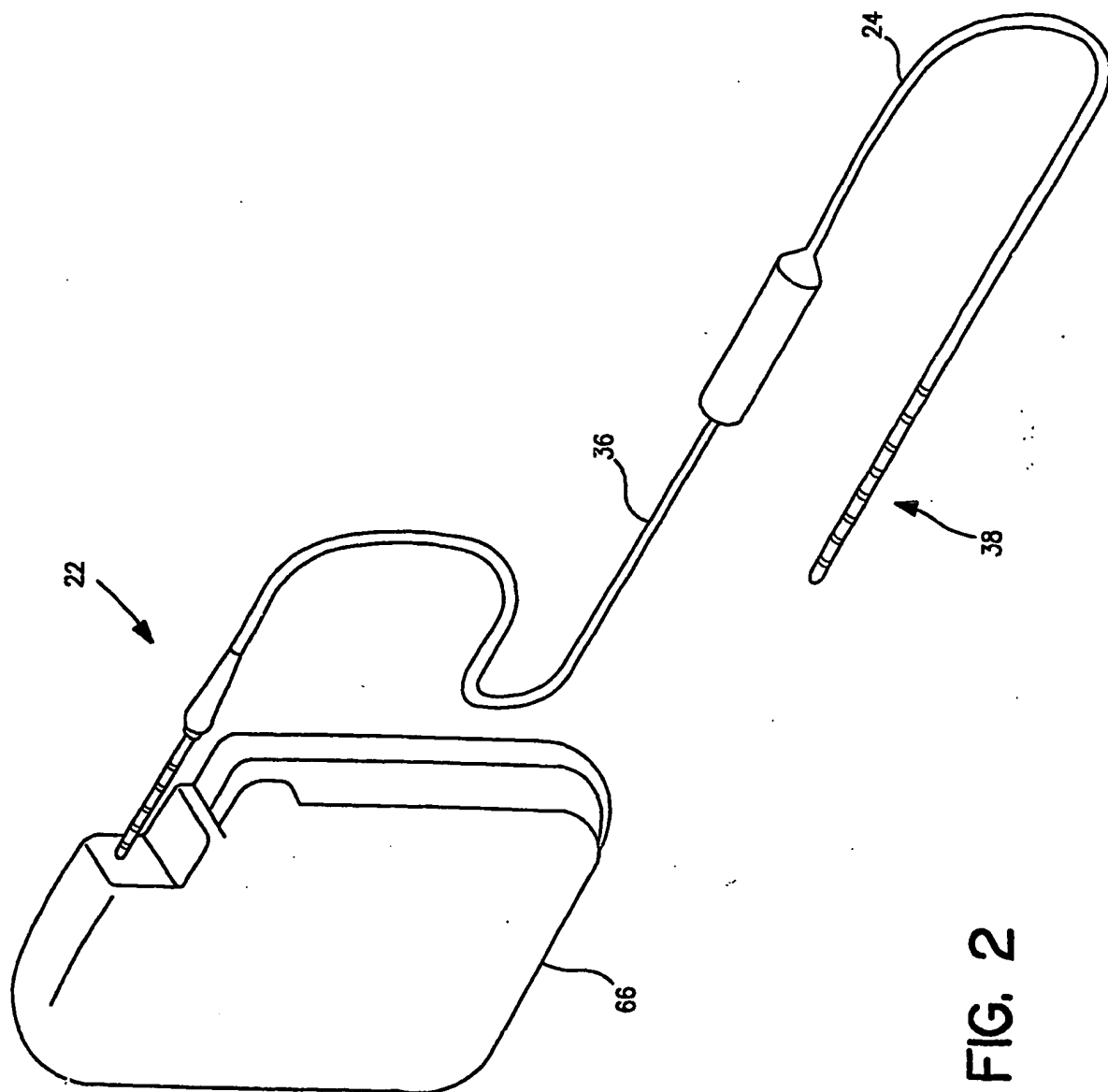


FIG. 2

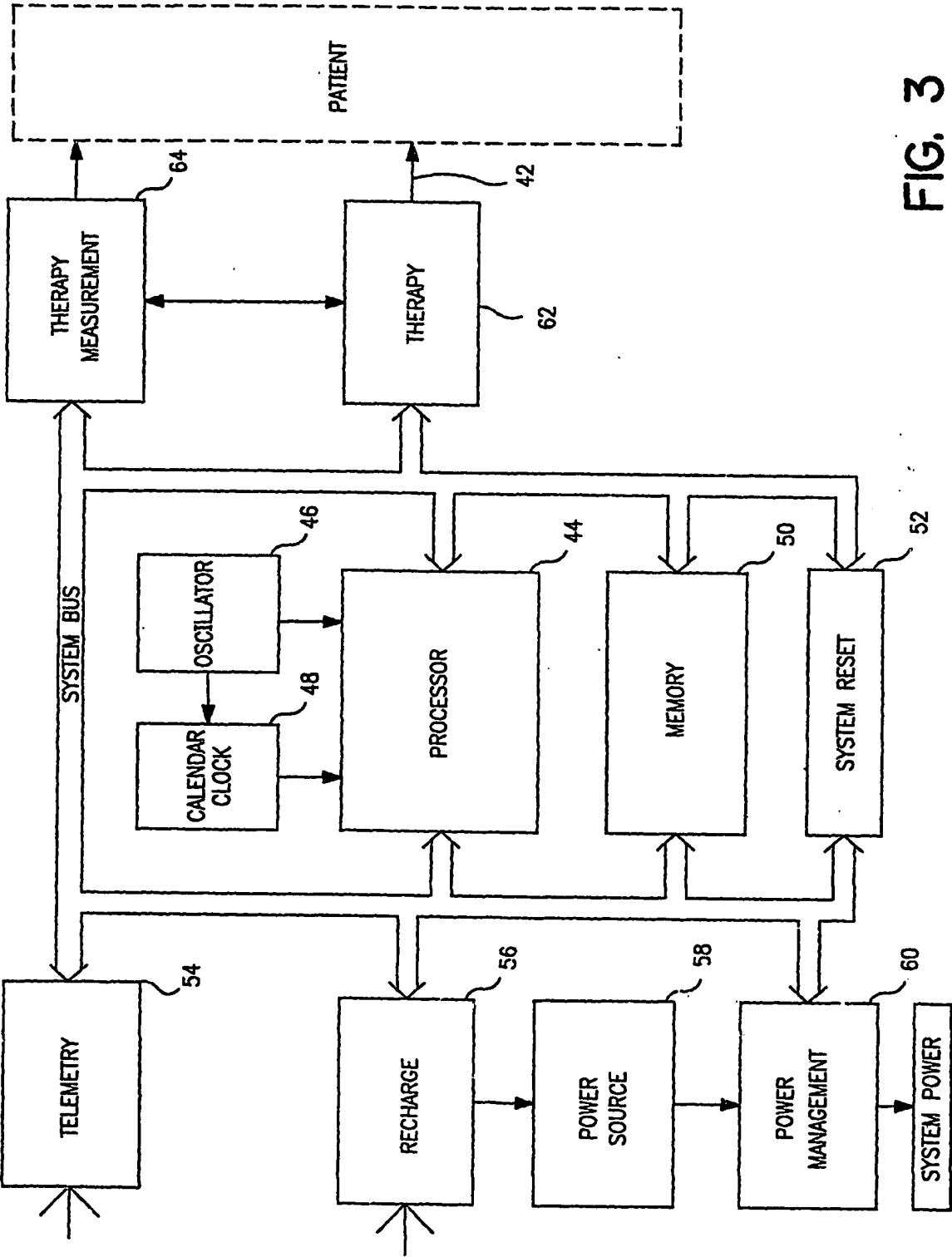


FIG. 3

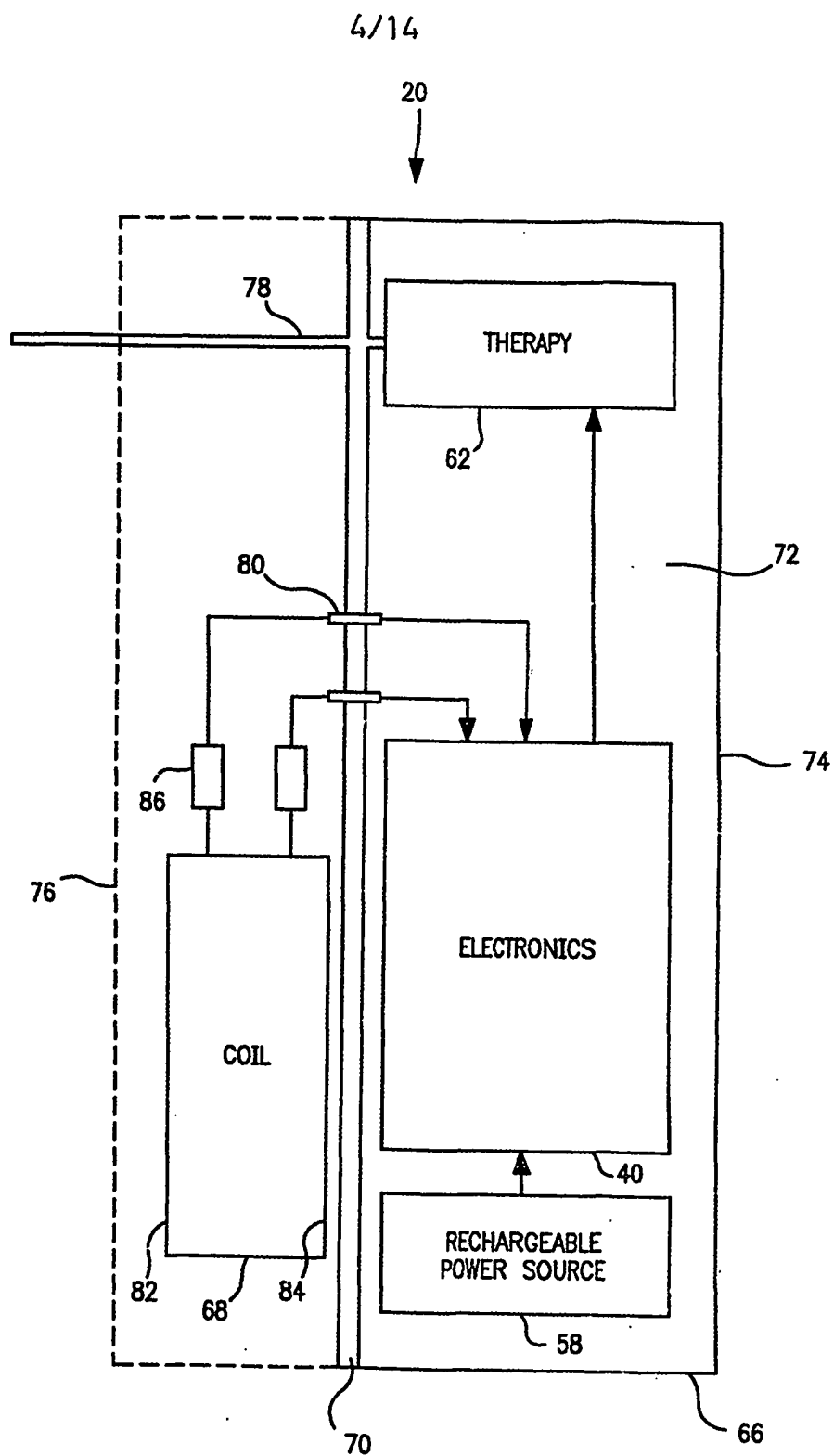


FIG. 4a

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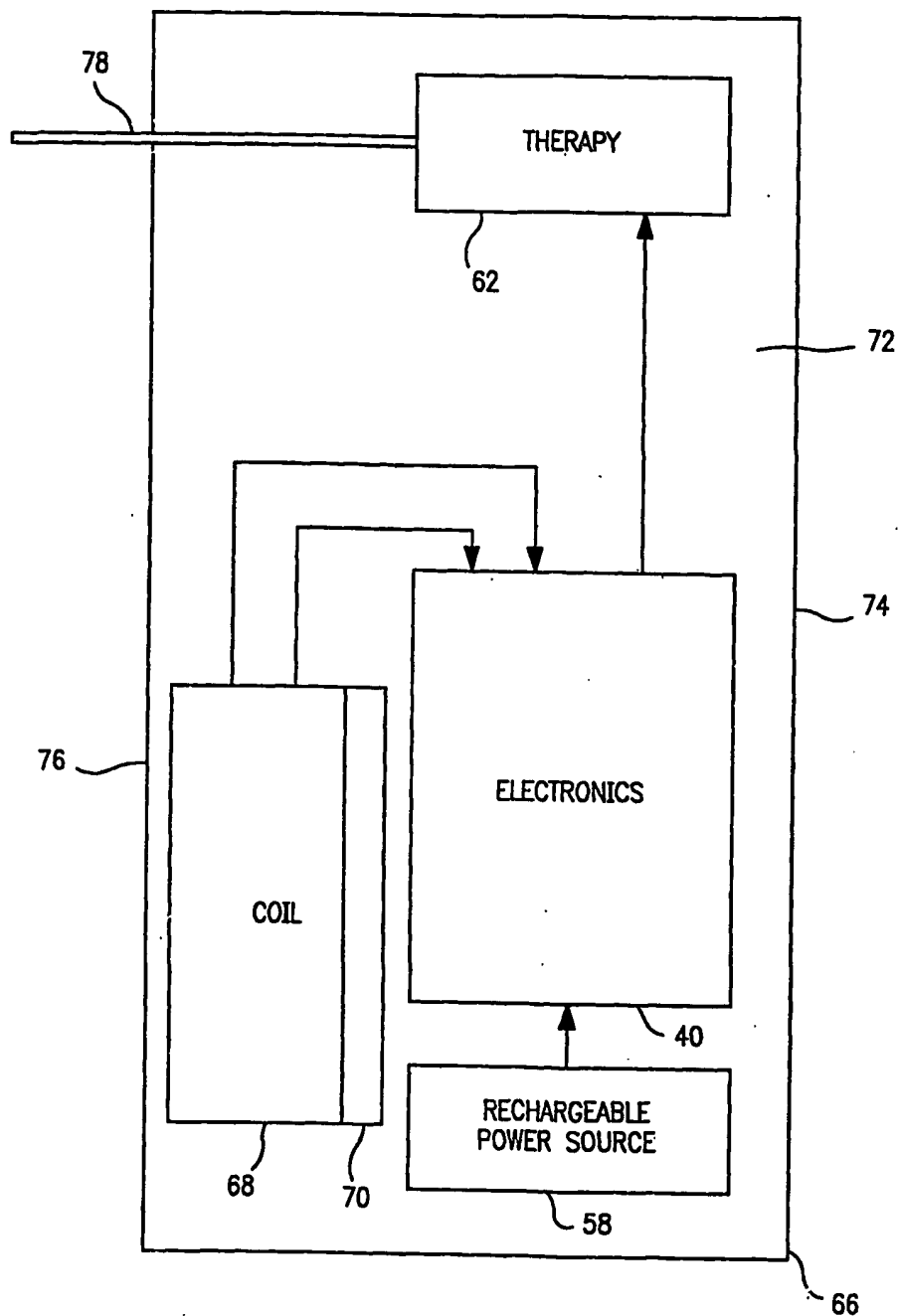


FIG. 4b

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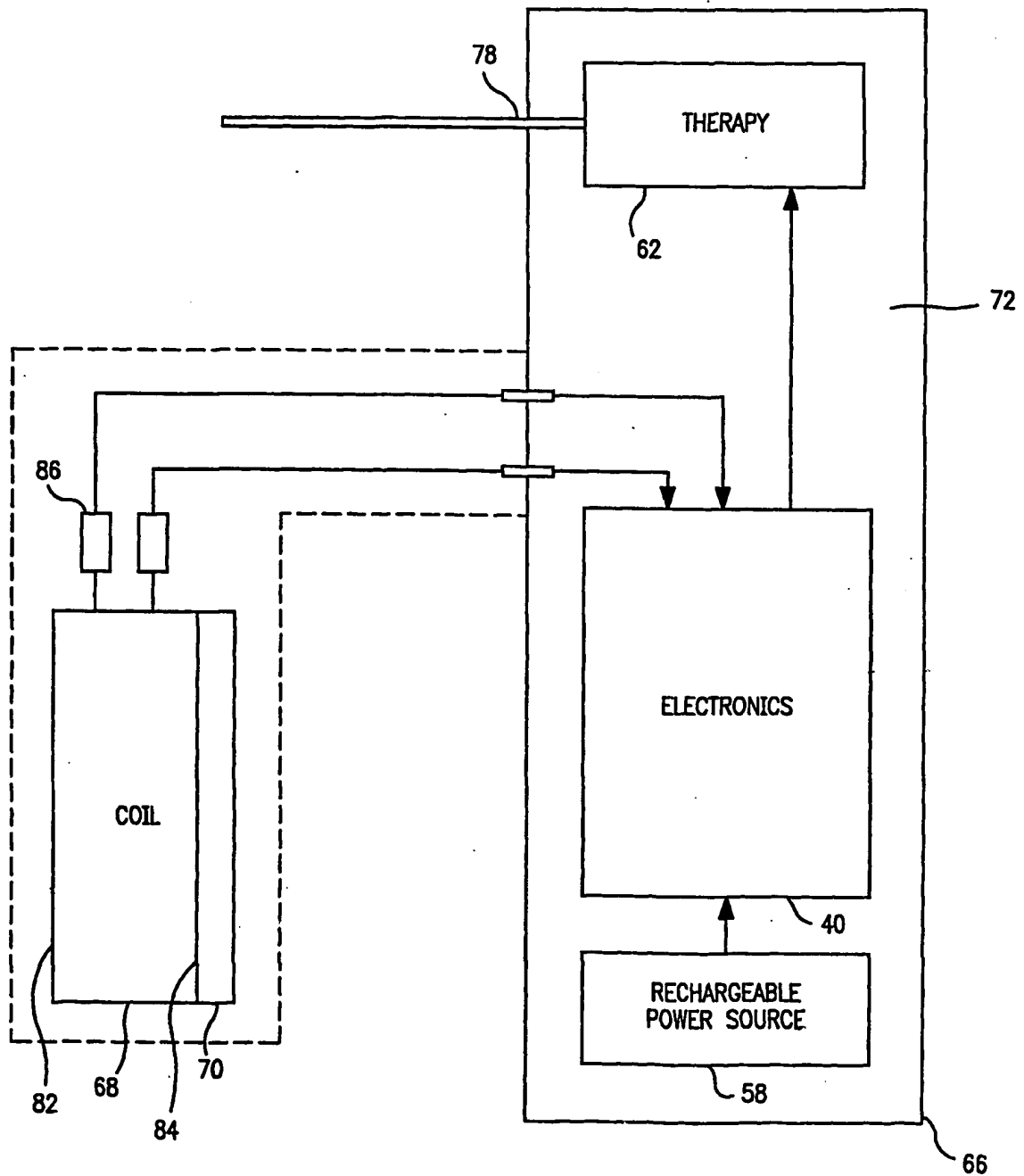


FIG. 4c

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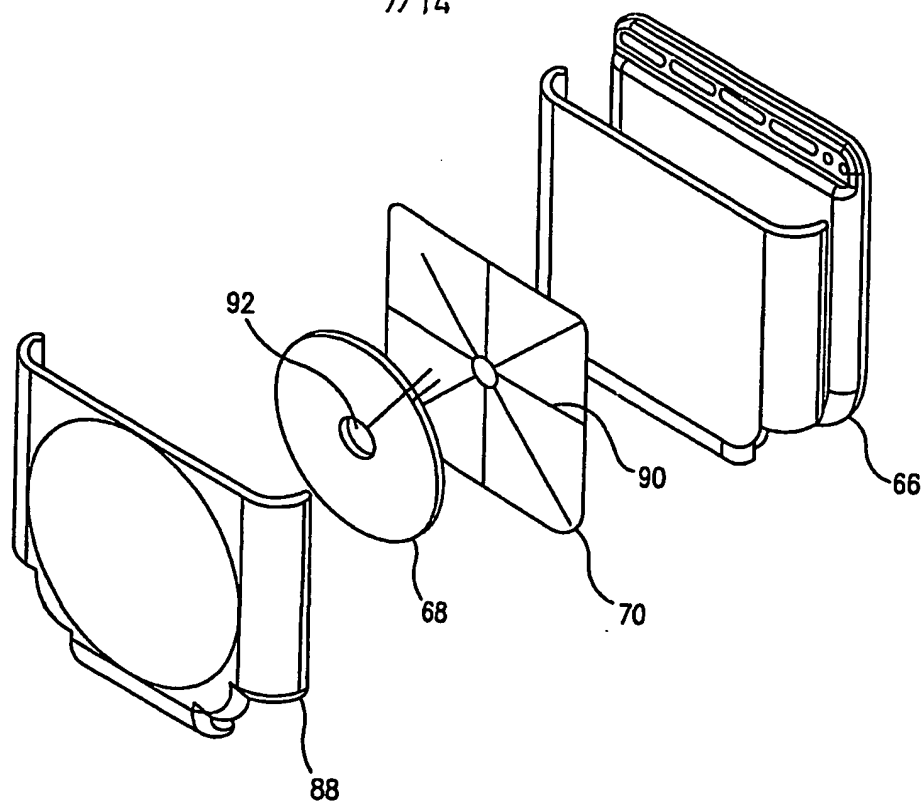


FIG. 5

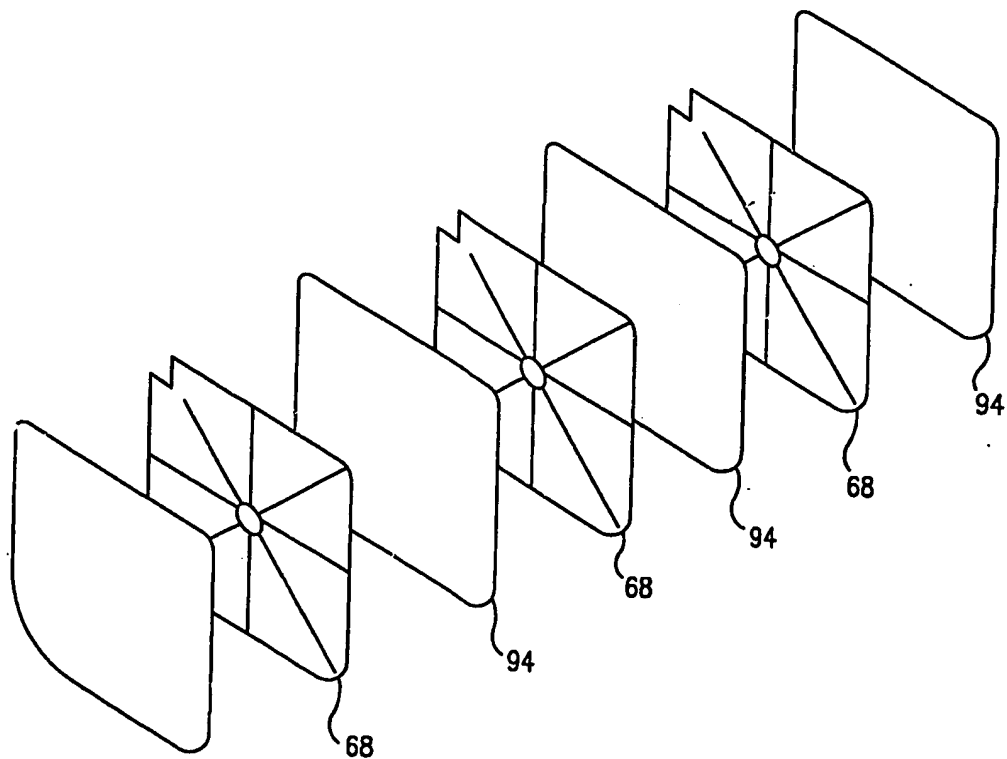


FIG. 6

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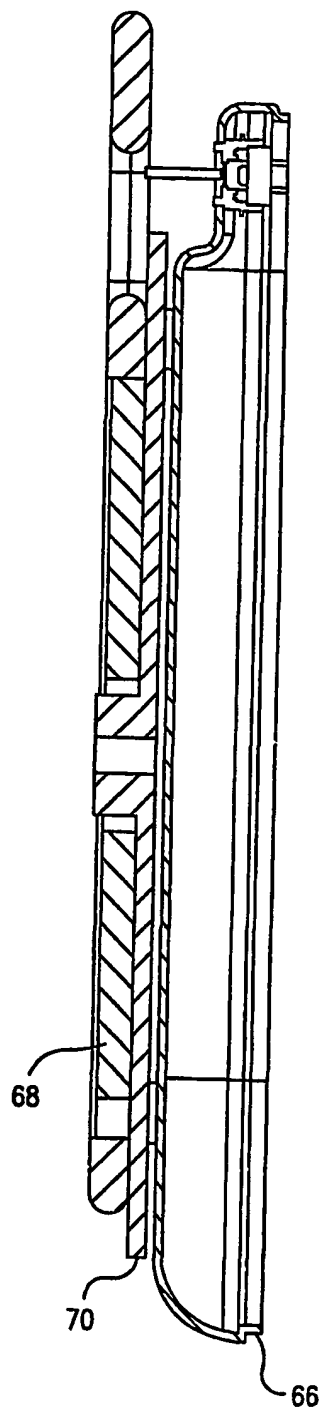


FIG. 7

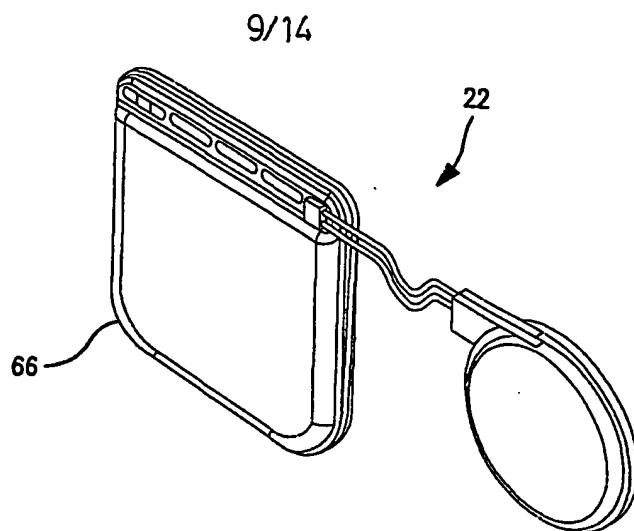


FIG. 8a

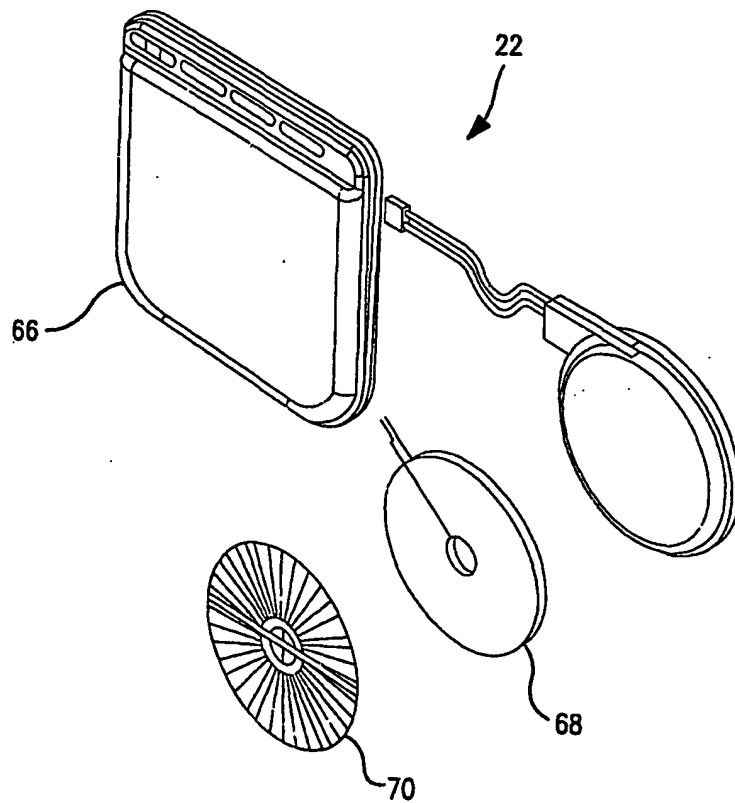


FIG. 8b

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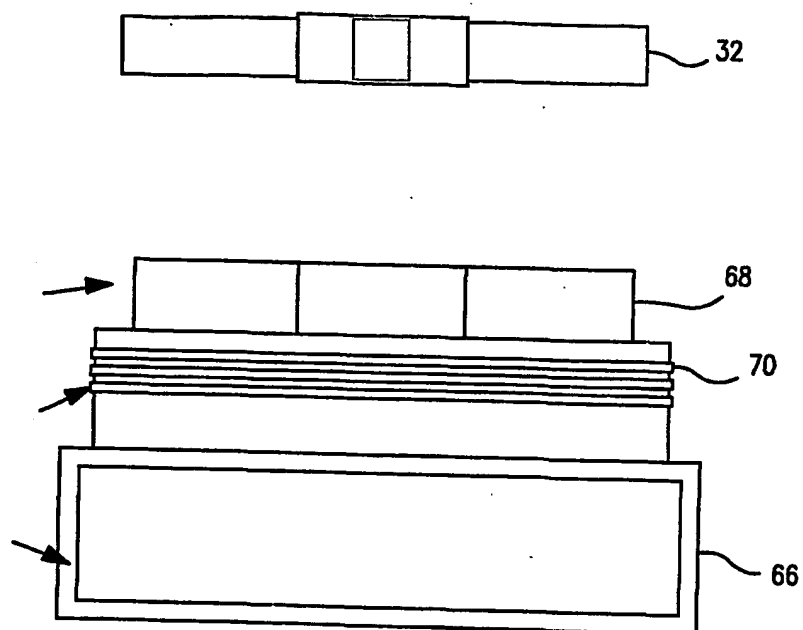


FIG. 9a

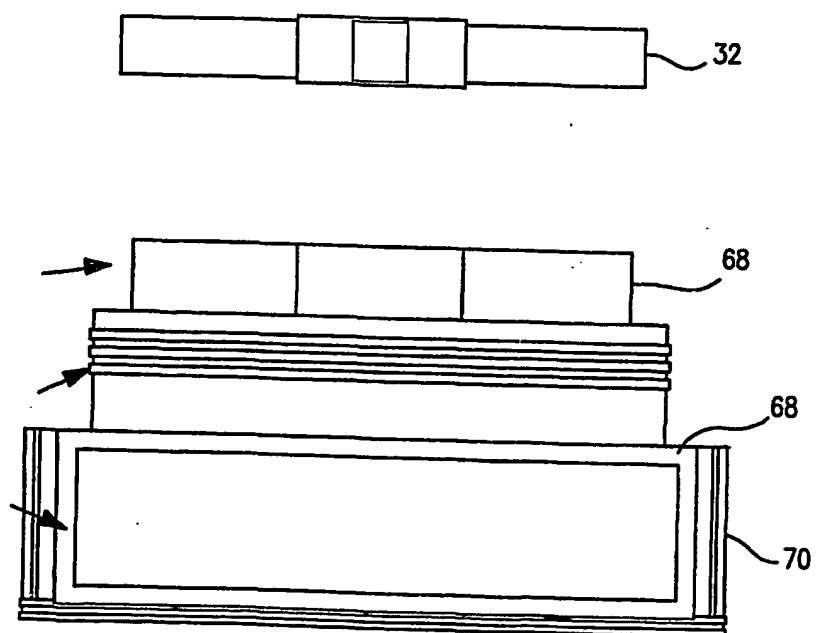


FIG. 9b

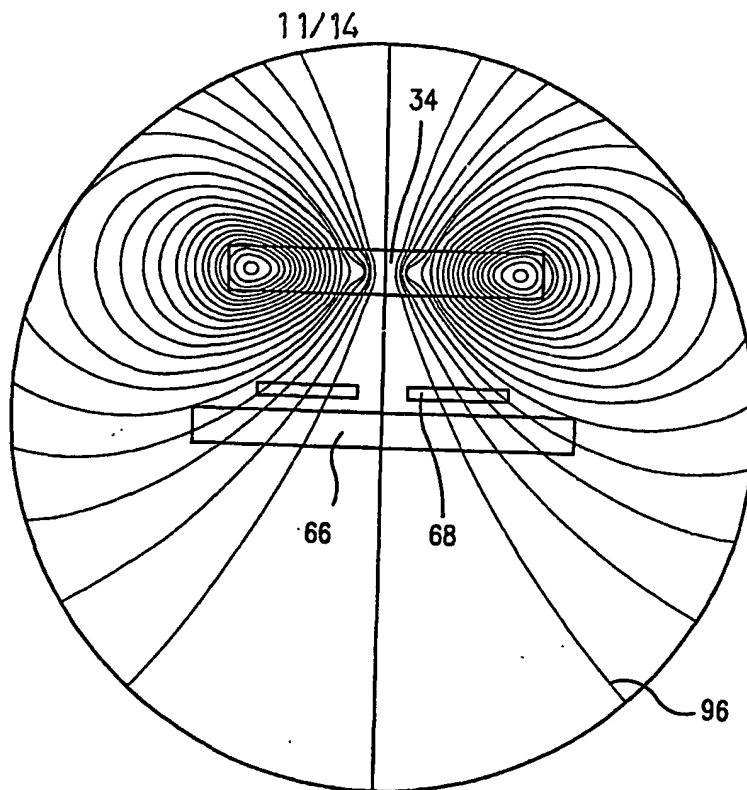


FIG. 10a

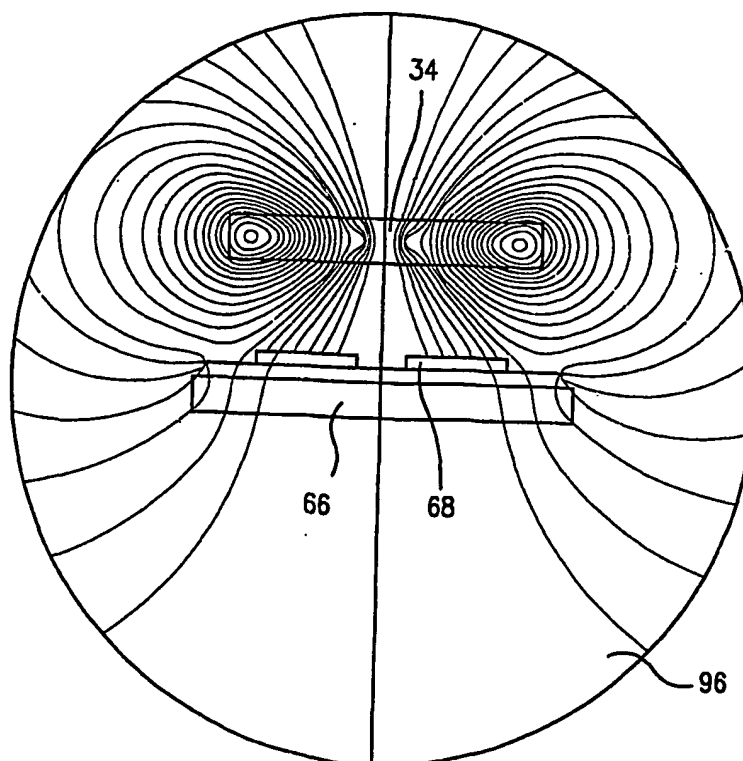


FIG. 10b

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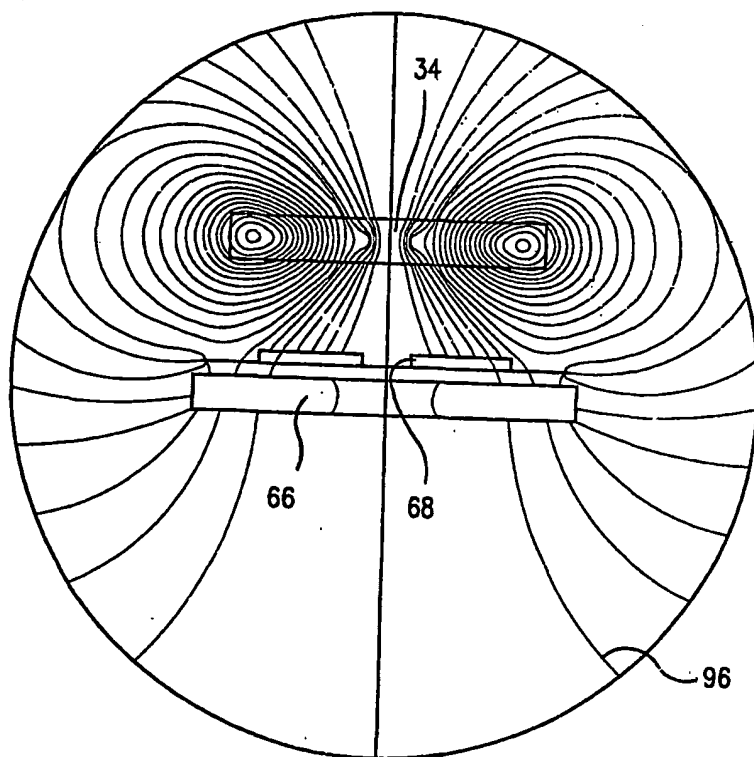


FIG. 10c

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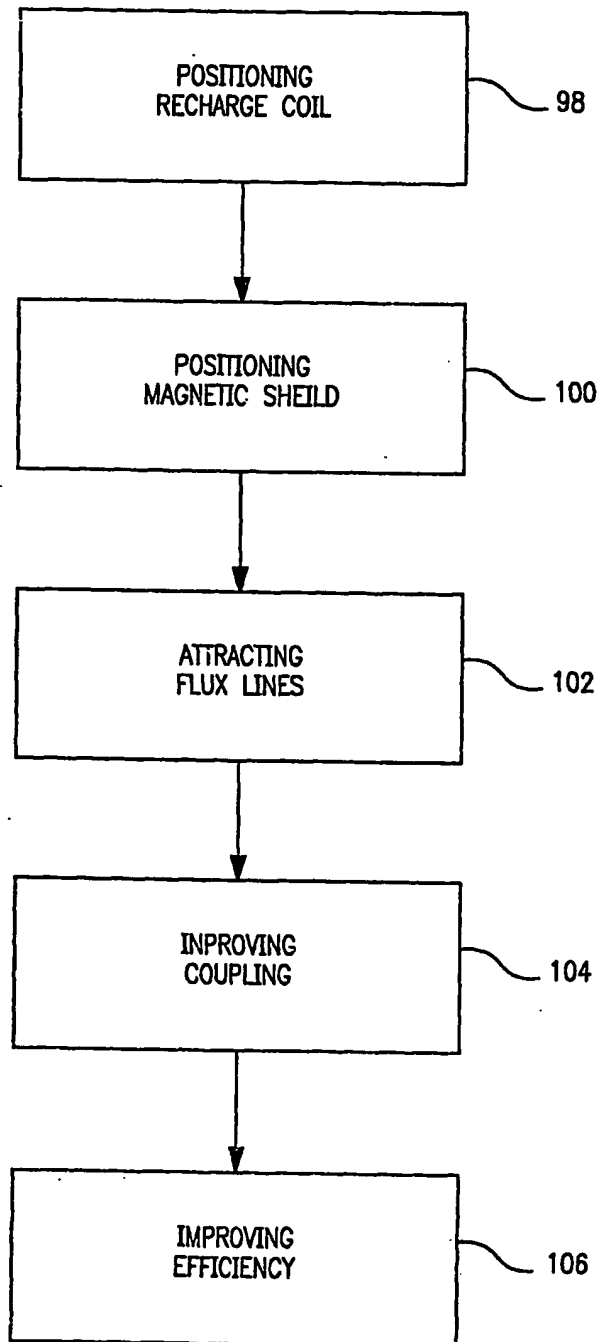


FIG. 11

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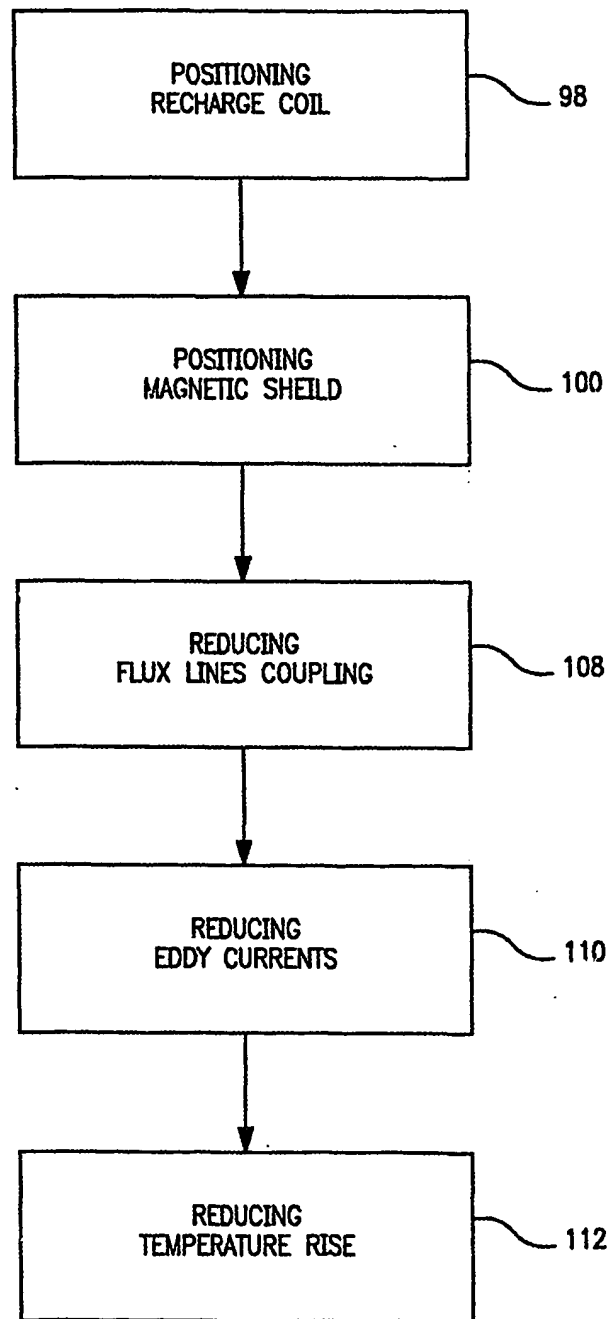


FIG. 12